

SILICON STATISTICS¹
U.S. GEOLOGICAL SURVEY
[All values in metric tons (t) silicon content unless otherwise noted]
Last modification: December 13, 2011

Year	Production	Shipments	Imports	Exports	Stocks	Apparent consumption	Unit value (\$/t)	Unit value (98\$/t)	World production
1923	NA	NA	11,700	NA	NA	NA	89	848	NA
1924	NA	NA	12,300	NA	NA	NA	101	966	NA
1925	NA	NA	4,630	NA	NA	NA	126	1,180	NA
1926	NA	NA	13,200	NA	NA	NA	104	952	NA
1927	NA	NA	7,460	NA	NA	NA	124	1,160	NA
1928	NA	NA	4,770	NA	NA	NA	136	1,300	NA
1929	NA	NA	9,430	NA	NA	NA	147	1,400	NA
1930	NA	NA	4,610	NA	NA	NA	135	1,320	NA
1931	NA	NA	959	NA	NA	NA	137	1,470	NA
1932	NA	NA	317	NA	NA	NA	139	1,650	NA
1933	NA	NA	942	NA	NA	NA	141	1,770	NA
1934	NA	NA	1,000	NA	NA	NA	143	1,740	NA
1935	NA	NA	794	NA	NA	NA	145	1,720	NA
1936	NA	NA	535	NA	NA	NA	147	1,720	NA
1937	NA	NA	2,060	NA	NA	NA	170	1,920	NA
1938	NA	NA	636	NA	NA	NA	211	2,440	NA
1939	NA	NA	1,050	NA	NA	NA	226	2,650	NA
1940	NA	NA	1,120	NA	NA	NA	234	2,730	NA
1941	NA	NA	5,620	NA	NA	NA	134	1,480	NA
1942	NA	NA	3,930	NA	NA	NA	145	1,450	NA
1943	NA	NA	817	NA	NA	NA	191	1,800	NA
1944	NA	NA	3,800	NA	NA	NA	197	1,830	NA
1945	NA	NA	6,520	NA	NA	NA	143	1,300	NA
1946	NA	NA	1,210	NA	NA	NA	216	1,800	NA
1947	NA	NA	1,940	NA	NA	NA	240	1,750	NA
1948	NA	NA	714	NA	NA	NA	288	1,950	NA
1949	NA	NA	874	NA	NA	NA	311	2,130	NA
1950	NA	NA	3,430	NA	NA	NA	232	1,570	NA
1951	NA	NA	10,100	NA	NA	NA	256	1,600	NA
1952	NA	NA	2,030	NA	NA	NA	331	2,030	NA
1953	NA	NA	2,000	NA	NA	NA	417	2,540	NA
1954	202,000	NA	3,630	NA	NA	195,000	366	2,220	NA
1955	272,000	NA	5,410	NA	NA	285,000	368	2,250	NA
1956	317,000	NA	4,670	NA	NA	300,000	374	2,240	NA
1957	266,000	NA	3,510	NA	NA	257,000	479	2,780	NA
1958	184,000	NA	2,180	NA	NA	202,000	417	2,350	NA
1959	237,000	NA	7,870	NA	NA	248,000	323	1,800	NA
1960	254,000	NA	4,780	NA	NA	232,000	338	1,860	NA
1961	237,000	231,000	2,120	NA	NA	235,000	458	2,500	NA
1962	292,000	252,000	2,350	NA	NA	293,000	457	2,470	NA
1963	305,000	276,000	2,160	NA	NA	308,000	418	2,220	NA
1964	354,000	340,000	2,720	3,630	53,500	357,000	392	2,060	1,130,000
1965	384,000	360,000	4,540	2,720	54,400	385,000	396	2,050	1,160,000
1966	379,000	363,000	11,800	3,630	49,000	393,000	381	1,920	1,160,000
1967	452,000	356,000	13,600	7,260	77,100	430,000	375	1,830	1,490,000
1968	456,000	394,000	9,980	11,800	62,600	469,000	383	1,800	1,540,000
1969	427,000	403,000	15,400	3,630	68,900	433,000	405	1,800	1,590,000
1970	481,000	355,000	9,070	20,000	59,900	482,000	370	1,550	1,640,000
1971	406,000	348,000	11,800	11,800	57,200	409,000	402	1,620	1,570,000
1972	485,000	425,000	27,200	6,350	54,400	509,000	412	1,610	1,670,000
1973	524,000	507,000	64,400	14,500	33,600	597,000	482	1,770	1,780,000

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1974	534,000	440,000	90,000	6,350	104,000	610,000	851	2,810	1,800,000
1975	429,000	341,000	46,000	17,200	108,000	458,000	658	1,990	2,100,000
1976	488,000	447,000	66,200	5,440	109,000	548,000	811	2,320	2,320,000
1977	488,000	444,000	92,500	4,540	106,000	579,000	832	2,240	2,260,000
1978	493,000	459,000	110,000	9,980	103,000	596,000	730	1,830	2,550,000
1979	560,000	479,000	92,500	14,500	93,400	647,000	824	1,850	2,840,000
1980	438,000	381,000	61,700	25,400	92,500	475,000	942	1,860	2,750,000
1981	432,000	357,000	126,000	15,400	113,000	522,000	972	1,740	2,600,000
1982	253,000	237,000	70,800	9,070	98,900	329,000	965	1,630	2,410,000
1983	302,000	285,000	121,000	8,160	78,000	435,000	871	1,430	2,540,000
1984	412,000	371,000	110,000	18,100	81,600	500,000	924	1,450	2,730,000
1985	363,000	305,000	140,000	8,160	92,500	484,000	928	1,410	2,830,000
1986	304,000	289,000	173,000	10,000	65,000	478,000	967	1,440	2,740,000
1987	338,000	309,000	171,000	15,000	52,000	507,000	1,040	1,490	2,760,000
1988	420,000	373,000	192,000	24,000	45,000	595,000	1,350	1,870	2,990,000
1989	439,000	368,000	157,000	32,000	61,000	548,000	1,210	1,590	3,380,000
1990	418,000	356,000	217,000	36,000	72,000	588,000	1,060	1,330	4,130,000
1991	363,000	335,000	164,000	35,000	64,000	500,000	1,090	1,300	3,950,000
1992	370,000	349,000	193,000	38,000	57,000	532,000	1,040	1,210	3,470,000
1993	367,000	345,000	212,000	31,000	48,000	557,000	1,140	1,280	3,200,000
1994	390,000	355,000	255,000	32,000	45,000	616,000	1,120	1,230	3,170,000
1995	396,000	368,000	250,000	47,000	35,000	609,000	1,380	1,470	3,100,000
1996	412,000	378,000	227,000	44,000	35,000	594,000	1,680	1,750	3,200,000
1997	430,000	384,000	256,000	50,000	44,000	628,000	1,520	1,550	3,400,000
1998	429,000	380,000	241,000	47,000	50,000	616,000	1,360	1,360	3,200,000
1999	423,000	379,000	286,000	61,000	54,000	643,000	1,230	1,200	3,400,000
2000	367,000	320,000	361,000	40,900	52,400	689,000	1,140	1,080	3,500,000
2001	282,000	250,000	231,000	22,900	40,600	502,000	1,140	1,050	3,500,000
2002	261,000	232,000	285,000	21,600	25,100	541,000	1,120	1,010	3,720,000
2003	253,000	255,000	315,000	26,200	22,500	544,000	1,240	1,100	4,390,000
2004	275,000	252,000	338,000	24,900	22,300	588,000	1,530	1,320	4,900,000
2005	269,000	247,000	349,000	30,900	18,800	592,000	1,560	1,350	5,310,000
2006	146,000	123,000	223,000	5,260	15,900	360,000	1,180	1,020	5,650,000
2007	155,000	132,000	208,000	6,580	13,800	359,000	1,440	1,130	6,330,000
2008	178,000	148,000	190,000	10,100	21,300	352,000	2,270	1,720	6,500,000
2009	139,000	121,000	69,600	8,670	13,900	207,000	1,670	1,270	6,520,000
2010	176,000	160,000	157,000	15,000	20,000	312,000	2,220	1,660	7,290,000

NA Not available.

¹Compiled by K.E. Porter (retired) and L.A. Corathers.

Data are calculated, estimated, or reported. See notes for more information.

Silicon Worksheet Notes

Data Sources

Sources of data for the silicon worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey: Minerals Yearbook (MYB) and its predecessor, Mineral Resources of the United States (MR); Mineral Commodity Summaries (MCS) and its predecessor, Commodity Data Summaries (CDS); and Mineral Facts and Problems (MFP). The years of publication and corresponding years of data coverage are listed in the References section below.

Production

Production data for 1954–68 were from the MFP. Production data for 1969–77 were reported in the CDS. Data for 1978 to the most recent year were reported in the MCS. Production data for 1954 to the most recent year represent the total gross production, by silicon content, of various grades of ferrosilicon and silicon metal that were produced annually within the United States. Starting in 2006, silicon metal production data are withheld to avoid disclosing company proprietary data.

Shipments

Shipment data for 1961 to the most recent year were reported in the MYB. Shipment data for 1961 to the most recent year represent the total silicon content in 48 percent ferrosilicon, 63 percent ferrosilicon, 76 percent ferrosilicon, 85 percent ferrosilicon, 88 percent ferrosilicon, 90 percent ferrosilicon, 98 percent silicon metal, 45 percent ferrosilicon briquets, and other miscellaneous silicon-containing alloys that were shipped annually to domestic recipients. Starting in 2006, silicon metal shipment data are withheld to avoid disclosing company proprietary data.

Imports

Import data for 1923–63 were reported in the MR and MYB. Import data for 1964–78 were from the MFP. Import data for 1979 to the most recent year were from the MCS. Import data for 1923–2005 represent the total silicon content in all silicon-containing materials that were imported into the United States for consumption. Starting in 2006, import data represent the silicon content in ferrosilicon imported into the United States for consumption only.

Exports

Export data for 1964–78 were reported in the MFP. Export data for 1979 to the most recent year were reported in the MCS. Export data for 1964–2005 represent the total silicon content in all silicon-containing materials that were exported from the United States to foreign recipients. Starting in 2006, export data represent the silicon content in ferrosilicon exports only.

Stocks

Stock data for 1964–78 were from the MFP. Stock data for 1979 to the most recent year were reported in the MCS. Stock data for 1964–95 represent the total silicon content in all silicon-containing materials that were held annually within industrial producer and consumer stockpiles. Stock data for 1996–2005 represent the total silicon content in all silicon-containing materials that were held annually within industrial producer stockpiles. Starting in 2006, stock data represents the total silicon content in all grades of ferrosilicon that were held annually within industrial producer stockpiles; silicon metal stocks are excluded to avoid disclosing company proprietary data.

Apparent Consumption

Apparent consumption data for 1954–68 were reported in the MFP. Apparent consumption data for 1969–77 were reported in the CDS. Data for 1978 to the most recent year were reported in the MCS. Apparent consumption data for 1954–2005 represent the total silicon content in all silicon-containing materials that were consumed annually within the United States. Starting in 2006, apparent consumption is for all grades of ferrosilicon only; silicon metal is excluded to avoid disclosing company proprietary data.

Unit Value (\$/t)

Unit value from 1961–2005 is the value in actual U.S. dollars of 1 metric ton (t) of silicon apparent consumption. Unit value was estimated by weight averaging the value of production and imports of all silicon-containing materials. Starting in 2006, unit value reflects the weighted average value of ferrosilicon production and imports; silicon metal is excluded to avoid disclosing company proprietary production data. Prior to 1961, only import values were used because of lack of production data.

Unit Value (98\$/t)

The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

World Production

World production data for 1964–78 were reported in the MFP. World production data for 1979 to the most recent year were reported in the MCS. World production data for 1964–2001 represent the total silicon content in all ferrosilicon and silicon metal that were produced annually, excluding silicon metal production in China. World production data for 2002 to the most recent year represent the total silicon content in all ferrosilicon and silicon metal that were produced annually, including silicon metal production in China. Starting in 2006, world production data exclude the amount of silicon metal that was produced annually in the United States. Global

silicon metal production data, on a gross-weight basis, were from the ferroalloys chapter of the MYB; the typical silicon content of silicon metal is 98% of the gross weight.

References

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